



US ARMY GARRISON ANSBACH, DPW ENVIRONMENTAL MANAGEMENT DIVISION (EMD)

Environmental News

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SEMS

POLLUTION PREVENTION

OUR SEMS GOALS FOR THIS YEAR

1. Improve communications and awareness for reuse/recycle
2. Conduct building audits to survey their sustainability and find areas for improvements
3. Promote a plastic bag-free garrison
4. Create a bee meadow at Soldiers Lake

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SPECIAL POINTS OF INTERESTS:

New Environmental Officer (EO) Training Link:
<http://imcom-e.eo-training.com/login.asp>

Visit our share portal:
https://army.deps.mil/army/cmds/imcom_eur-usag/ansbach/SitePages/Home.aspx

USAG Ansbach Energy Efforts

The White House declared October as the National Energy Awareness Month. This national effort is to underscore how central energy is to the national prosperity, security, and environmental well-being. Here at USAG Ansbach we also recognize how important that effort is and are always actively working on implementing new projects or ideas that help the Garrison to be more sustainable in terms of energy usage. As such, it is high-time to present a few of the energy saving projects that have been implemented in the Garrison in the past few years or that are in the middle of being implemented right now.

Urlas Passive Houses

In partnership with the Nürnberg Bauamt (German State construction office), the Army set a new benchmark for Family Housing projects. The project constructed one street of a new Army family housing neighborhood to be certified to the ultra-low energy standards known in Germany as *Passivhaus*. These standards are much more rigorous than those in the United States. *Passivhaus* standards use one-fourth of the energy demanded by typical facilities constructed in Germany. They are called *Passiv* (or passive, in English) because the interior climate is intended to be maintained without active heating and cooling systems, which means that the house heats and cools itself. IMCOM-Europe has constructed 22 *Passivhaus* townhouses out of 108 total townhouses built in 2010 in the Urlas Housing Area of USAG Ansbach.

REM Program

USAG Ansbach is paving the way for Germany and all other European U.S. Army Garrisons in Resource Efficiency Managers (REMs) procurement and implementation. According to Army Regulation 420-1 an energy manager is required for every 5 million square feet. As the Garrison has a facility footprint of 7.2

million square feet, USAG Ansbach would actually require 2 fulltime energy managers to effectively manage the energy program. To offset this deficiency the REM procurement was prioritized by the Garrison. After diligence and hard work Ansbach is in the final stages of the procurement process and will be leveraging REMs to meet and exceed the U.S. Army reduction goals and mandates. The procurement will cover all USAG Ansbach facilities and will include providing support to any future forward operating sites.

Shipton CO-GEN

Shipton Sokratherm, a combined cycle gas co-generation plant, is one of the first U.S. Army co-generation unit installations in Germany. Shipton simultaneously produces electricity and thermal energy from natural gas, which results in a highly efficient use of energy. The Shipton Sokratherm unit is a 200kW unit that was installed as a pilot project in 2015. The unit produces on average 149MWh of electricity per year. This production of power can be compared to running 13 average size homes with a household of 5 people for a whole year. At the current electric price USAG Ansbach has saved approximately \$25,000 by running this type of system.

Illesheim Solar Systems

The Illesheim solar thermal systems were installed between 2012 and 2013 with the support of our highly skilled and teamwork oriented DPW staff. This effort was undertaken to address heat deficiencies in surrounding buildings and to meet U.S. Army sustainable building design directives and to offset building heating demands. High efficient Evacuated Heat Pipe Tubes (EVAT) absorb solar radiation. This solar energy is then absorbed by the antifreeze in the closed system and is transferred through a heat exchanger in the buffer tank. Collectively on average these systems are producing a total

Upcoming Events

October is Energy Awareness and Action Month



Save Energy
Save Money
Save the Environment

Small actions every day add up to big results!

Halloween
October 31st 2019

Thanksgiving
November 28th 2019

of 53 MWh of thermal energy which translates to \$6K in yearly savings.

ESPC

The USAG Ansbach Energy Savings Performance Contract (ESPC) project was initiated in 2016 and proceeded to begin at the end of FY17. Ansbach elected to use U.S. Army Corps of Engineers Huntsville Center of Excellence based on their expertise and experience with the ESPC contract model. The Preliminary Assessment was conducted and looked at the highest energy use intensity buildings in the Garrison. After a competitive selection process Siemens Government Services was selected based on expertise, facility needs and understanding. Ansbach is currently in the detailed feasibility study phase. Based on the selected energy conservation measures Ansbach is expecting a project estimate at approximately \$40 million dollar and in the range of a 19 year contract.

By Juan Murillo & Pia Amberger



Black Skimmer feeding cigarette butt to her chick¹



Stand Ashtray



Flora incognita², Nature free-Europa³, Merlin Bird ID⁴

Cigarette Butts: A Danger To The Environment? by Pia Amberger



Black skimmers (*Schwarzmantel-Scherenschnabel*), a bird species only native to North and South America, fly closely over the sea with an open beak. The lower mandible is longer than the upper part of their beak and is used as a plow. If it comes into contact with something - usually fish - the beak snaps shut rapidly. This special way of hunting proved to be disastrous for a black skimmer at St. Pete Beach, Florida as depicted on the photo to the left. As we continue to pollute our planet with waste, the black skimmers method of randomly fishing for food nowadays has unhealthy if not fatal consequences. In this case, the adult black skimmer accidentally caught a cigarette butt in the ocean, which it proceeded to feed to their young.

The World Health Organization (WHO) conducted a global study on cigarette butts in the environment in 2017. According to the study, cigarette filters made up around 40% of the garbage collected on coasts or in streets since the 1980s. About 340 to 680 million kilograms of cigarette

butts are disposed of annually through out the world.

From an environmental point of view this creates several problems. The cigarette butts filter is made of the synthetic material cellulose acetate, which takes decades to disintegrate into micro-plastic particles. Micro-plastic particles are an increasing burden on oceans and other waters. Furthermore, the substances that are bound in the filter are also quite troublesome. When water washes out the filters, thousands of chemicals are released. The WHO estimated that in appropriate sun and weather conditions those could be up to 7,000 different substances. These include heavy metals such as arsenic and lead, as well as the neurotoxin nicotine.

If these chemicals enter the water cycle, they can cause problems in our groundwater, among other things. Rainwater can flush the cigarette filters into soils, groundwater, rivers or lakes and damage living organisms, such as fish. A study by the University of San Diego with trout found that

just one cigarette butt per liter of water is enough to kill the fish after four days. According to the scientists, the pollutants can also make it into our food chain via the poisoned fish when they end up on our plates. Does this mean that cigarette butts should be considered hazardous waste?

No, cigarette butts are residual waste and are treated like typical municipal waste or street sweepings. In Germany, they end up being incinerated, which causes no additional negative environmental consequences. They are only problematic if they are not properly disposed of and end up in the environment. For that matter, DPW O&M and the Cross Functional Team have installed white and yellow stand ashtray in various central locations around the Garrison. Next time you are on a smoke break, look for these ashtrays to dispose of your cigarette butt. Do not throw them to the ground on-post or off-post. Always dispose of them properly to keep our Garrison clean and to help the environment.



Green Corner: What's Blooming There? by Max Weggenmann

Attention, nature enthusiasts. When you're outside, have you ever stumbled upon an interesting flower? Have you ever wondered, what kind of tree is growing over there? Maybe you have encountered a flock of birds, who's song you liked. Or their feathers had an interesting color pattern? Doesn't that sometimes make you wonder, what else might be living around you? Wouldn't it be nice to know what species you're dealing with in your neighborhood? Environmental experts, such as biologists, spend years of research and training in order to be able to characterize and determine a certain group of species, but fear not! If you are interested in your surroundings, I am going to present a few convenient shortcuts for you. Therefore, you won't need years of research and expertise in order to determine species around your neighborhood, you can just use your smartphone. The best part is: It's all free, of course. For beginners, I recommend the following apps:

If you are interested in plants growing around you - **Flora Incognita**

This app was developed by the Technical University of Ilmenau and is designed to help you identify wild plants. You can download it in the Play Store and App Store for around 9 MB and install it. If the default language settings are still in German, click the three dots in the upper right corner, choose "Einstellungen" (gearwheel), go to "Sprachen" and select English. You then can identify a plant by deciding if it's either herb or shrub, a tree, grass or sedge or a fern. If you've decided what you're dealing with, the app will ask you to take a picture of the plant, and voila! You can choose from different suggestions and document your observations.

Keep in mind that the app was designed to identify wild flowers, so it might have some troubles identifying non-native garden plants.

In case you are more interested in the birds flying around: - **Merlin Bird ID**

The app itself can be downloaded in either Play- or Appstore for around

31 MB. In order to use the app, you'll need to install a "Bird package". You can either choose from a list or let the app decide, according to your GPS location. Each package holds all the available information for the native birds on the chosen area. If you are interested in the birds here in Germany, I recommend the "Europe: Western" package. It can be downloaded for 385 MB, so might want to do that at home when you're connected to your WiFi. Once installed, the app will need some information about the bird in question: Where did you see the Bird, when did you see the bird, what size was the bird, what were its main colors, what was it doing?

You will once again get a list with suggestions and can choose your bird. Alternatively, there is a possibility of photo identification, but it'll need another 119 MB of data and let's be honest: Have you ever tried to get an accurate picture of a bird mid-flight? Me neither.

If you just need an all around nature guide for Europe - **Nature Free - Europa**

Unfortunately, this app is only available for Android phones and can be downloaded for around 116 MB from the Play Store. Pay attention with the spelling, since the app is explicitly spelled Europa. Should the app be in German language, just click the English flag in the top left corner.

Unlike Flora Incognita or Merlin Bird ID, there is no automatic identification with Nature Free- Europa, it's more of a reference book on plants and wildlife in Europe. Nonetheless, with this app installed on your smartphone, you'll be well prepared for all wildlife and plant related questions that might occur. Plus, you can take a small quiz to test your knowledge on European wildlife.

Of course there are more nature related apps that exist. The selected few are just examples. The main goal of this article was to give you a quick overview, and to set you up for plant and wildlife identification in your neighborhood. On this note, have fun exploring local plants and wildlife.

¹stern.de; ²floraincognita.com; ³androidliste.de; ⁴apps.apple.com